

Program Name	TeleMed Program, Texas Department of Criminal Justice	HealthNet (Texas Tech University)	Arapahoe County Adult Detention Center (Englewood Co. Contract)	Tufts-New England Medical Center	Rural Eastern Carolina Health Network (REACH-TV)
Location	Galveston, TX	Lubbock, TX	Denver, CO	Boston, MA	Greenville, NC
Contact Information	Steven F. Viegas, M.D. 409/772-2565	Charles Hickman 806/743-1500	Ted Willich 703/818-3311	John Patterson, CIO 617/636-7636	John Tichenor, PhD. 919/816-2473
Hubs	4	5	1	7	1
Spokes	1	119	1	20	8
Date of program inception:	10/1/94	1/1/89		6/93	8/8/92
Two-way interactive video technology	1. CD	1. CD 2. BBD 3. BBA 4. POTS	1. CD	1. CD 2. POTS	1. CD 2. NC Dept of Corrections (?) 3. POTS
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. T1 2. 1/2 T1 3. 1/4 T1 4. ISDN	1. T1 2. 3.3 Mbps (ATM) 3. broadcast analog 4. POTS 5. 1/4 T1 6. ISDN	ISDN	1. 1/4 T1 2. POTS	1. 1/2 T1 2. 1/4 T1 3. ATM 4. T1 5. ISDN
System Configurations	RmSys & Codec; DT & Codec	RmSys & Codec, RmSys & LAN	DT & Codec		Rm & Codec, DT & Codec, DT & LAN
Videoconferencing System Vendors	CLI & Intel	Built own system	Tandberg	Medical Image Management	CLI, P-Tel, ShareVis
Network Services Vendor	TX Dept. of Info. Resources/ Vidnet	Provide own network services	N/A	NYNEX (local); MCI (Int'l)	Carolina Sprint (T1)
Multipoint Conference Capable?	Yes	Yes	No	No	Yes
Telecommunications Services	ISDN	1. Fx T1 2. ATM 3. M-wave 4. POTS	Sw56	ISDN	1. FxT1 2. M-wave 3. ATM 4. Sw56 5. POTS
Greatest Distance Between Sites (Miles)	252	500	25	5,400	160
Total Number of Videoconferences in 1995	2524	5508	500	400	1288
Number of Patient-Physician Consults	1,852	731	400	400	338
Hours of Patient-Physician Consults	908		100	300	
Videoconferences by Category (number/hours)	P-Ph: (-/907.5h); Ph-Ph (-/12h); Edu. (-/16h); Med. admin. (-/16.5h); Net admin. (-/35h)	Ph-Ph: (1823/-); Edu: (3685/-); Surg (132/-)	P-Ph: (400/100h); Edu. prog.: (15/10h); Med. ad.: (15/10h); Bus.: (5/10h); Mental health (65/12h)		P-Ph: (338/-) Net Admin (47/-)
Patient/Physician	-/908 (2,780 pt/MD consults between 11/94 and 5/96)		400/100		338/-
Physician/Physician	-/12	1092			0
Educational Programming	-/16	3685	15/10		0
Medical Administrative	-/16.5		15/10		
Community Services					
Business			5/10		
Network Administration/Service	-/35				47/-
Other (Specified)			Mental Health (65/12)		903 (unspecified)
Length of Average Clinical Consultation (min.)	10	18	15	30	30
Specialties in Patient/Physician Consults (Top 3)	1. Gen Surg 2. Gen Ortho 3. Gen Med		1. Primary Care 2. Mental health		1. Derm 2. Neuro 3. GI
Specialties in Physician/Physician consults		1. Neur 2. Internal Med 3. AHPT 4. Derm 5. Surg			
Types of funds used to implement network	Internal (100%)	Internal (20%); Federal grants (80%)	Internal (100%)	Internal (99%)	Internal (20%) Fed (75%) State (5%)
Type of funds used to operate network	Internal (100%)	Internal (100%)	Internal (100%)		Internal (15%) Fed (70%) Other (15%)
Reimbursement	managed care/capitated care orgs	managed care/capitated; private contracts	managed care/capitated care orgs		Federal (Office of Rural Health Policy); NC Prison System contract
Comments	UTMB-G cares for 80% of the inmates of the TX Dept. of Criminal Justice Prison System across the state -- 146,000 inmates at 95 primarily rural sites. We are actively expanding the TeleMed system, both technologically and to a variety of non-TDCJ sites.		The teleMed portion of our contract represents a small piece of a total delivery system.	Major int'l site brought on line in mid-1995, with current vol. of 6-7 consults/wk. Projected volume at all sites 20-30/week by 1997, incl. home health, nursing homes, prisons. Integrating all data into open, SQL-based record.	Put a lot of energy/emphasis on the coordinators/personnel at the spoke sites. Must be a team effort among engineers, physicians, nurses, coordinators, support staff -- everybody involved.

Program Name	University of Kansas Information Technology Services & Research	Eastern Montana TeleMed Network	Georgia Statewide Telemedicine Program	Tripler Army Medical Center (Telemedicine NCOIC)	Dakota TeleMed System	Bay Area Community Health and Education (BACHEN)-Stanford TeleMed Program
Location	Kansas City, KS	Billings, MT	Augusta, GA	Honolulu, HI	Bismarck, ND	Stanford, CA
Contact Information	Pam Whitten Ph.D. 913/588-2224	Thelma McClosky Armstrong 406/255-8420	Laura Adams, 706/721-6616	Victoria Garshnek, Ph.D. 808/836-2094	Carla Anderson 701/221-5616	Rodney C. Hawkins 415/725-8994
Hubs	2	1	13		1	1
Spokes	10	8	49		4	4
Date of program inception:	1991	9/1/93	11/91		2/1/95	1995
Two-way interactive video technology	CD	1. CD	CD	CD	1. CD	CD
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1/4 T1	1/4 T1	T1	1/4 T1, ISDN	1. >1.544 Mbps (Dedicated T1 service)	1/2 T1
System Configurations	RmSys & CODEC	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec
Videoconferencing System Vendors	MTI (integrator), CLI, BT	VTEL	State Designed	CLI, P-Tel	VTEL; Swiderski (integrator)	md/tv
Network Services Vendor	State leased T1	Ascend; ADC Kentrox; US West	GA State system & Bell South	AT&T	US West	N/A
Multipoint Conference Capable?	Yes	Yes	Yes	Yes	No	No
Telecommunications Services	Fx T1	1. FxT1 2.Sw56	1. Full T1	1. Sw56 2. ISDN	1. FxT1	ISDN
Greatest Distance Between Sites (Miles)	380	360	400	6000	200	From Stanford, CA to Singapore
Total Number of Videoconferences in 1995	1081	721	350	300	346	238
Number of Patient-Physician Consults	291	234	217	200	190	184
Hours of Patient-Physician Consults				150	78	
Videoconferences by Category (number/hours)	P-Ph: (291/-); Ph-Ph (?); Edu: (376/-); Med Admin (292/-); Net Admin (110/-)	P-Ph 234/-; Ph-Ph (45/-); Edu: (107/-); Med. admin. (100/-); Comm. serv. (55/-); Bus. (28/-); Net admin. (152/-)	P-Ph(217/-) Ph-Ph (39/-); Edu*; Nurse/PA-Pt (95/-)	P-Ph: (200/150) Bus (100/100)	P-Ph (190/75); Ph-Ph: (10/3); Edu* (33/-); Med admin (30/-); Bus (29/-);Net admin (22/-)	P-ph: (184/-) Ph-Ph: (54/-)
Patient/Physician	291/-	234/-	217/-	200	190	184/-
Physician/Physician	?	45/-	39		10	54/-
Educational Programming	376/-	107/-			33	
Medical Administrative	292/-	100/-			30	
Community Services		55/-				
Business		28/-		100	29	
Network Administration/Service	110	152/-				
Other (Specified)	12		Nurse/PA-Pt: (95/-) Training - /228h		Physician recruitment (32); Training (22)	
Length of Average Clinical Consultation (min.)	30*	15-20	35	60	23	25
Specialties in Patient/Physician Consults (Top 3)	1. Onc 2. Psych 3. Neuro	1. Psych	1. Neuro 2. CV 3. Derm	1. Ortho 2. Derm 3. Peds	1. Emergency/Trauma 2. Ortho 3. Mental health	1. Derm 2. Plastic Surg 3. Liver txplnt
Specialties in Physician/Physician consults		1. Derm 2. Neurol 3. Rad	1. Neuro 2. CV 3. Derm	1. Ortho 2. Derm 3. Peds	1. Emergency/Trauma 2. Ortho 3. Mental health	1. CV 2. High-risk OB
Types of funds used to implement network	Internal (each site pays expenses): 95% Grants: 5%	Internal (50%); Federal grants (50%)	MCG (91-94): Internal (26%); State (58%); Private (16%) GTSP (94-) State (98%) MCG (2%)	Internal (50%); Fed (50%)	Internal (80%); Federal grants (20%)	Internal (participant sites); private foundation/grants; other
Type of funds used to operate network	Internal (each site pays expenses)	Internal (50%); Federal grants (50%)	Internal (21%); State contract (42%); MCG (37%)	Fed (100%)	Internal (100%)	Internal (participant site); private foundation/grant; other funds
Reimbursement	BC/BS of KS; medical care contracts; Medicaid (as of June 1996)	Medicaid; Blue Cross/Blue Shield; Private insurers (unspecified); Private contracts with individual clinics or hospitals	Medicare; Medicaid; BC/BS; Private contracts w/individual clinics or hospitals			managed / capitated care organizations; private contracts with individual clinics/hospitals
Comments	Due to contracts with rural medical systems, 1996 patient/physician consultations are running at about 60/month	Psych: 20; Non-psych: 15; (Patient was present in Ph-Ph consult 95% of the time)	*Physicians and other health professionals can receive CME credit through this network		39% of consultations are emergent. Average length of consult by encounter type: Medical consults: 23; Administrative/edu.: 47 * Educational includes preceptor encounters	

Program Name	APPAL-LINK: Southwest VA TelePsych Project	The Ohio State University Medical Center TeleMed Program	University Hospital of Tromsø, Norway	Mayo Tele-Healthcare Center	Louisiana TeleMed Project	Nebraska VideoConferencing Network
Location	Marion, VA	Columbus, OH	Tromsø, Norway	Rochester, MN	New Orleans, LA	Omaha, NE
Contact Information	Norma Hite 540/783-1200 ext. 174	Michelle Gailiun 614/293-3776	Torill Berg +47-776-28150	Marvin P. Mitchell 507/284-2910	Mary Anne Little, RN 504/588-3507	Dr. Reba Benschoter 402/559-7100
Hubs	1	1	1	3	2	1
Spokes	3	2	50	10	6	14
Date of program inception:	2/14/95	April 1995	1988	10/3/86	4/1/94	1993
Two-way interactive video technology	1. CD	1. CD	1. CD	1. Analog video (not POTS) 2. CD 3. BBD	1. CD	CD
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1/4 T1	1/2 T1	1. 1/4 T1 2. ISDN	1. T1 2. broadcast analog 3. 1/4 T1	T1	1/4 T1
System Configurations	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec; RmSys & LAN; Baseband video	RmSys & Codec	RmSys & Codec
Videoconferencing System Vendors	FreBor International Corp.	VTEL	Phillips; Tandberg; Sony	NEC	Hughes -Link	VTEL
Network Services Vendor	FreBor	Ameritech; Sprint	TeleNor	Sprint; MCI; AT&T; GE Americom		AT&T (state owned network)
Multipoint Conference Capable?	Yes	Yes	Yes	Yes	Yes	Yes
Telecommunications Services	ISDN	1. FxT1 2. Sw56 3. ISDN 4. Analog (satellite, microwave, etc.) 5. POTS 6. ATM	1. ISDN	1. FxT1 2. Analog (sat/m-wave, etc) 3. ATM 4. Sw56	FxT1	FxT1
Greatest Distance Between Sites (Miles)	170	110	530	6,200	350	400
Total Number of Videoconferences in 1995	280	128	499	3339	226*	170
Number of Patient-Physician Consults	149	129	129	78*	76	72
Hours of Patient-Physician Consults	75	75			254	72
Videoconferences by Category (number/hours)	P-Ph: (149/75h); Comm serv: (4/10h); Bus.: (25/35h); Case Conferences, family visits, & commitment hearings: (102/105h)	(Est.) P-Ph: (-/75h); Med admin : (-/75h); Bus.: (-/50); Net admin : (-/50h)	P-Ph (129/-); Ph-Ph: (75/-); Edu: (125/-); Med admin (170/-)	Not Available	P-Ph: (76/254h); Edu.: (150/118h)	P-Ph: (72/72) Ph-Ph: (36/36) Med Admin: (50/50) Net Admin: (12/12)
Patient/Physician	149/75	-/75	129/- mult by 12 div by 7		76/254	72
Physician/Physician			75/-			36
Educational Programming			125/-		150/118	
Medical Administrative		-/75	170/-			50
Community Services	4/10					
Business	25/35	-/50				
Network Administration/Service		-/50				12
Other (Specified)	Case conf, family visits & commitment hearings (102/105)					
Length of Average Clinical Consultation (min.)	30	12	90	30	20	60
Specialties in Patient/Physician Consults (Top 3)	1. Psych	1. Pulm 2. GI 3. Surg	1. Rad 2. Derm 3. ENT	1. Gen'. Cardiol 2. Liver txplnt 3. Speech pathol.	1. Psych 2. Neur 3. Pediatric Endocr	1. Med 2. Derm 3. HIV/AIDS
Specialties in Physician/Physician consults			1. Psych 2. Surg 3. Rad	Not Available	1. CV	1. Med/FP 2. Derm 3. HIV/AIDS
Types of funds used to implement network	Federal grants 100%	State or local:100%	Internal (20%); Federal grants (60%); Local (10%); Private foundation/grants (10%)	Internal (100%)	State/local funds (100%)	State
Type of funds used to operate network	Federal grants: 68%; Other federal funds: 32%	Internal: 20%; State/local: 80%	Internal (80%); Federal grants (20%)	Internal (100%)	Internal; Federal grants; State and LSU S.O.M. support	State
Reimbursement	Medicaid	State prison contract with OSUMC for medical care		managed / capitated care organizations; private contracts with individual clinics/hospitals	State funded reimbursement account	Prison contract
Comments	Avg length of visit per type of encounter: P-Ph: 30; case conf: 30-60; family visits: 30; commitment hearings: 60	1996: we are increasingly busy, now averaging 75 consults/month. This should increase to >100/mo after Aug '96, when new clinics, 3 new sites, and a new scheduler are added.		*In 1995 Mayo clinics also performed 721 IATV-mediated echocardiography exams	ORHP grant, funding started 9/94, through 9/96. Total grant funding \$272k; yr. 2 \$298k; yr. 3 \$245. Now changed to CLI and runs at full T1	

Program Name	University of Minnesota TeleMed Center	MCV TeleMed - The Blackstone / Powhatan Projects	Allina Health System/Rural Health Alliance TeleMed Network	Pennsylvania HealthNet	Midwest Rural TeleMed Consortium	TX Children's Hospital/Baylor College of Med. Telehealth Program
Location	Minneapolis, MN	Richmond, VA	Minneapolis, MN	Harrisburg, PA	Des Moines, IA	Houston, TX
Contact Information	Dr. James House 612/625 7951	R. Scott Krick 804/828-8319	William Goodall, M.D. 612/992-3047	Adeline Barwick 717/772-5298	Paul Maakestad 515/247-8750	George Suhr, R.N. 800/TCH-TELE
Hubs	1	1	3	4	2	1
Spokes	5	2	10	8	13	2
Date of program inception:	1995	10/1/95	5/1/95	1993	8/1/95	April 1994
Two-way interactive video technology	1. CD	1. CD	1. CD	1. BBD	1. CD	CD; BBD
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. 1/2 T1 2. T1	1. T1	T1	>1.544 Mbps	1. T1 2. 1/2 T1 3. 1/4 T1	1/2 T1, T1
System Configurations	RmSys & Codec	RmSys & Codec	DT & Codec; RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec
Videoconferencing System Vendors	CLI	Hughes-Link; VTEL	VTEL	MTI Telemedical	CLI	CLI
Network Services Vendor	Means	Bell Atlantic; Hughes Training-Link Div.	US West; Means	PA State Communication System	US West, GTE, Iowa Communications Network	MCI/AT&T
Multipoint Conference Capable?	did not specify	No	Yes	Yes	Yes	No
Telecommunications Services	FxT1	FxT1	FxT1	1. ISDN	1. ISDN (PRI) 2. POTS	Analog (Sat/m-wave); FxT1
Greatest Distance Between Sites (Miles)	400	60	250	325	125	7436
Total Number of Videoconferences in 1995	173	69	250	386	142	202
Number of Patient-Physician Consults	64	60	55	54	50	39
Hours of Patient-Physician Consults	13	30	50			39
Videoconferences by Category (number/hours)	P-ph: (64/13h); Ph-Ph: (6/6h); Edu. (51/51h); Med. admin. (47/47h) Net admin. (5/5h)	P-Ph: (-/30h) Edu.: (5/-) Net Admin : (-/10h)	P-Ph: (55/50h); Edu. (100/-); Med admin: (85/-) Comm serv.: (10/-)	P-Ph: (54/-); Edu: (Combined Conferences (mostly CME): (332/-))	P-Ph: (50/-); Edu: (20/-); Med Admin : (1/-); Comm. serv: (17/-); Bus.: (46/-); Net admin: (8/-)	P-Ph: (39/39) Ph-Ph: (18/18) Edu: (100/100) Med Admin (20/30) Comm serv (2/5) Bus: (8/15) Net admin (15/30)
Patient/Physician	64/13	-/30	55/50	54/-	50/-	39
Physician/Physician	6/6					18
Educational Programming	51/51	5/-	100/-	332	20/-	100
Medical Administrative	47/47		85/-		1/-	20
Community Services			10/-		17/-	2
Business					46/-	8
Network Administration/Service	5/5	-/10			8/-	15
Other (Specified)						
Length of Average Clinical Consultation (min.)	30	30	50		20	60
Specialties in Patient/Physician Consults (Top 3)	1. Derm 2. Psych 3. Ortho	1. Infectious disease 2. Derm 3. CV	1. CV 2. Onc 3. Psych	1. Neur 2. Derm 3. CV	1. (tie) Cardio, Psych (12); 2. Onc (6); 3. Ortho (4)	All peds: 1. Developmental 2. Pulm 3. Psych
Specialties in Physician/Physician consults	1. Derm 2. Rad 3. Psych					All peds: 1. uro 2. dev. 3. psych
Types of funds used to implement network	Internal (50%); Federal grants (50%)	State or local funds: 90% Commercial: 10%	Internal funds (75%); Federal grant funds (25%)	State/local funds (100%)	Internal; Federal grants	Internal (100%)
Type of funds used to operate network	Internal (50%); Federal grants (50%)	State/local: 100%	Internal (100%)	State/local funds (100%)		Internal (100%)
Reimbursement	managed care/capitated care orgs; County Social Service for Mental Health		Private insurer (Medicaid); managed / capitated care orgs		Medicare (pending); Medicaid (proposed); Blue Cross/Blue Shield (proposed)	
Comments		A successful telemed application is team-centered. We'd have never have gotten off the ground without talented people from many backgrounds: medical, technical, academic, business.			Avg length of consult by specialty: Cardio: 26; Onc: 30; ENT: 12; Derm:12; Psych 23; Ortho: 22; PedCardio: 30; GI: 10; Pain Mgmt: 30; PlasticSurg: 60; Neuro: 25; PedPsych: 40)	

Program Name	University of Arkansas Medical Sciences TeleMed Program	Mountaineer Doctor TeleVision (MDTV)	Southwest Montana TelePsych Network	U. Of Wisconsin Hospital & Clinics / Waupun Correctional Institution	Virginia Mason Medical Center Telemedicine Demo Project	Harvard Telepsychiatry Project
Location	Little Rock, AR	Morgantown, WV	Helena, MT	Madison, WI	Seattle, WA	Belmont, MA
Contact Information	Steven Strobe, M.D. 501/686-2590	Robert G. Pennington 304/293-6926	Jeff Folsom 406/447-2800	Armond H. Start, MD, MPH 608/263-1326	Keith Lundberg 206/223-6351	Peter Cukor, PhD 508/655-6020
Hubs	1	2	1	1	1	2
Spokes	12	13	4	1	3	
Date of program inception:	9/1/94	Spring 1991	9/1/94	1995	4/95	1994
Two-way interactive video technology	1. CD	1. CD 2. Analog video (other than POTS)	1. CD	1. CD	1. CD	1. CD 2. IVR (Interactive Voice Response, Computer Tel)
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. 1/4 T1 2. 1/2 T1	T1	1. 1/4 T1 2. 1/2 T1	1/4 T1	1. 1/2 T1 2. 1/4 T1 3. BBA	1. 1/4 T1 2. ISDN
System Configurations	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec, DT & Codec
Videoconferencing System Vendors	VTEL	CLI	CLI	P-Tel	VTEL	P-Tel
Network Services Vendor	SW Bell	AT&T	AT&T	AT&T	US WEST, ATT, GTE, PTI	Nynex / Sprint
Multipoint Conference Capable?	Yes	Yes	No	Yes	Yes	No
Telecommunications Services	1. FxT1	1. FxT1 2. ISDN	FxT1; ISDN; Sw56	ISDN	FxT1	ISDN
Greatest Distance Between Sites (Miles)	325	345	100	50	900	25
Total Number of Videoconferences in 1995		109	109	30*	33	29
Number of Patient-Physician Consults	35	32	30	30	22	20
Hours of Patient-Physician Consults	9	13		25		20
Videoconferences by Category (number/hours)	P-Ph: (35/9.25h); Edu: (-/475.5h); Med admin :(-/58.5h)	P-Ph: (32/13h) Ph-Ph: (10/3h) Edu: (-/402 h) Med Admin : (-/127h) Comm Serv: (-/21h) Bus consults: (-/87h) Net. Ad : (-/30h) Credit Courses/Dist. Ed: (-/257h)	P-Ph: (30/-); Ph-Ph: (7/-); Edu: (12/-); Med admin : (15/-); Bus.: (1/-); Net admin : (42/-); Court proceedings: (2/-)	P-Ph: (30/25); Ph-Ph: (30/25); Edu (-/50)	P-Ph (22) Edu (19*) Med Admin (2) Other (11)	P-ph: (20/20); Edu: (1/2); Bus: (5/5); Case conf (3/3)
Patient/Physician	35/9.25	32/13	30/-	30/25	22	20/20
Physician/Physician		10/3	7/-	* (during Pt-Phys)		
Educational Programming	-/475.5	-/402	12/-	-/50	19*	1/2
Medical Administrative	-/58.5	-/127	15/-		2	
Community Services		-/21				
Business		-/87	1/-			5/5
Network Administration/Service		-/30	42/-			
Other (Specified)		Credit courses/distance ed. (-/257)	Court Proceedings (2/-)		Speech Therapy (11)	Case conference: 3/3
Length of Average Clinical Consultation (min.)	30-45	22	?	20	30	60
Specialties in Patient/Physician Consults (Top 3)	1. Adult CV 2. Adult Onc 3. Derm	1. Derm 2. CV 3. Psych	1. Psych 2. Ortho	1. Imm/HIV 2. Ortho 3. Endocr	1. Oncol 2. Cardiol 3. Rehab/speech	Psych
Specialties in Physician/Physician consults	1. Adult CV	1. Rad		1. Imm/HIV 2. Ortho 3. Endocr.r	1. Oncol 2. Cardiol	
Types of funds used to implement network	Internal; federal grants; state/local	Internal (participant site); federal grants; private foundation/grants	Internal funds; federal grant funds; state/local funds;	State/Local	Internal, private foundation/grant	Internal (100%)
Type of funds used to operate network	Internal (university) funds	Internal funds: 10%; Federal grants: 80%; private foundations: 10%	Internal; federal grants; state/local funds	Internal	Internal (100%)	Internal (100%)
Reimbursement	Medicare (pilot program)	Medicaid; private insurers (Public Employees Insurance Agency-PEIA); managed/capitated care orgs.; workers' compensation	Medicaid	Not reimbursed, all physicians are "state" employees and receive no direct reimbursement	Indian Health Services, worker's comp	
Comments		Uniquely, this project requires no technical assistance to use the equipment at either end. The system is available 24 h/day and 7 d/wk for clinical consults. Clinical usage will increase with more reimbursement for physician services.		For telemed to expand and be accepted by the physicians of this country a professional compensation package must be implemented	* Educational consults include tumor boards and grand rounds	

Program Name	Wyoming Medical Center/Converse County Memorial Hospital TeleMed Project	Upper Peninsula TeleMed Network	Kirby/Carle TeleMed Program	University of Miami TeleMed Program	Children's Memorial Hospital TeleMed Program
Location	Casper, WY	Marquette, MI	Urbana, IL	Miami, FL	Chicago, IL
Contact Information	Geoffrey Smith, MD 307/234-6963	Sally Davis, MA 906/225-3470	Wayne Mathews, PA-C 217/352-5712	Anne Burdick, MD, MPH 305/243-3780	Kaliopie Berdusis, BA, RDMS 312/880-3026
Hubs	1	1	1	1	1
Spokes	1	10	2	1	3
Date of program inception:	1995	8/1/94	Spring 1994	4/1/91	1993
Two-way interactive video technology	1. CD 2. POTS Video	1. CD 2. POTS	1. BBD 2. CD	1. CD 2. POTS Video	1. CD 2. BBD 3. POTS
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. 1/4 T1 2. POTS	1. ISDN 2. POTS	1. POTS 2. T1	1. ISDN 2. POTS	1. 1/4 T1 2. T1 3. POTS
System Configurations	DT & Codec	RmSys & Codec	RmSys & Codec	RmSys & Codec	DT & LAN
Videoconferencing System Vendors	md/tv	P-Tel	VTEL	P-Tel	AT & T Comprehensive Communications
Network Services Vendor	US West	Ameritech	Ameritech	50*	American Cabletron
Multipoint Conference Capable?	No	Yes	No	No	In Sept. 1996
Telecommunications Services	1. FxT1 2. POTS	1. ISDN 2. POTS	1. POTS 2. FxT1	1. ISDN 2. POTS	1. FxT1 2. POTS 3. ISDN
Greatest Distance Between Sites (Miles)	150	280	75	40	30
Total Number of Videoconferences in 1995	145	84	170		57
Number of Patient-Physician Consults	20	17	15	15	12
Hours of Patient-Physician Consults	20	6			6
Videoconferences by Category (number/hours)	P-Ph: (20/20h) Ph-ph (113/75h) Med Admin (12/24h)	P-Ph: (17/6h) Ph-Ph (teleRad): (-/125h) Edu (-/90h) Med admin: (-/90h) Comm serv: (-/25h); Bus.: (-/100h); Net admin: (-/10h)	P-Ph (15/-); PA-ph: (70/-); Edu; Med admin: (15/-)		P-Ph: 12/6h; Ph-Ph: 32/16h; Med admin: 1/4h; Bus.: 12/42h
Patient/Physician	20/20	17/6	15/-	15/-	12/6
Physician/Physician	113/75	-/125	70/-	35/-	32/16
Educational Programming		-/90	70/- (est)		
Medical Administrative	12/24	-/90	15/-		1/4
Community Services		-/25			
Business		-/100			12/42
Network Administration/Service		-/10			
Other (Specified)					
Length of Average Clinical Consultation (min.)	50	20	30-45	10	15 (for CV)
Specialties in Patient/Physician Consults (Top 3)	1. Derm 2. Gyn 3. Ortho	1. Psych 2. Peds (gen & psych) 3. Neonatology	1. ER 2. CV 3. Surg	1. Derm	1. CV
Specialties in Physician/Physician consults	1. Cardiol 2. Onc. conf. 3. Gyn	1. Rad 2. Neurosurg 3. Psych	1. ER, 2. Rad		1. CV 2. Rad
Types of funds used to implement network	Internal (participant site) funds: 100%	Internal: 62%; Federal grants: 38%	Internal funds (10%); State/local funds (20%); Private foundation/grant funds (70%)	Internal; Private foundation/grants	Internal (participant site); private foundation/grants
Type of funds used to operate network	Internal (participant site): 100%	Internal; Federal grants	Internal (70%); Federal grants (15%); State funds (15%)	Internal; Private foundation/grants	Internal
Reimbursement	None yet. Administrative and business uses may soon provide return on investment	Private contracts with individual clinics or hospitals	managed / capitated care organizations		Private contracts with individual clinics or hospitals
Comments	Diagn. radiology has a separate teleradiology system which is being used to transmit thousands of images each month.	The physicians continue to request improved accessibility to integrate telemed into their daily routine. We are pleasantly surprised at the number of clinical apps that can be done at low bandwidth. Avg. consult length: psych: 25; rad: 10	Build your program around identified needs. Avg. length of consult by encounter type: telerad: 30; P-Ph: 25; Pt-phys: 10-15; Edu. prog: 1h; Med admin: 1h	Also use AT & T (store & forward Picasso Phone). 2 ongoing accuracy studies: 1. Derm Foundation Grant: live interactive vs. in person via S&F and IATV; exam + telemicroscopy. 2. Health Fndtn of S. Florida: Accuracy of telederm. in AIDS patients.	We are evaluating archival & retrieval systems. Rad just started in April 1996 so volume & type of user frequency may change. By 12/96 CV will have 7 sites and 1 internat'l link to Greece.

Program Name	Walter Reed Army Medical Center TeleMed Directorate- North Atlantic Health Service Support Area	Mid-Nebraska TeleMed Network	University of Manitoba Videoconferencing Centres	Iowa Health Systems	Kentucky TeleCare (University of Kentucky)	McKenna TeleMed Project
Location	Washington, DC	Kearney, NE	Winnipeg, Manitoba	Des Moines, IA	Lexington, KY	Sioux Falls, SD
Contact Information	Linda R. Youngblood Sales 202/782-4029	Donna Hammack 308/865-2700	Gabrielle Bartsch-Smith 204/789-3438	Ginny Wagner 515/241-5998	Jim Norton, PhD 606/323-8018	Delores Schlotterback 605/339-1703
Hubs	4	2	1	1	3	1
Spokes	1	5	5	2	3	1
Date of program inception:	11/1/92	12/6/95	9/27/95	Sept. 1993	10/95	10/1/94
Two-way interactive video technology	BBD	1. CD	1. CD	BBD	CD	1. CD 2. POTS Video
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. ISDN 2. 1/4 T1 3. POTS	1. T1	1. ISDN 2. 1/4 T1	DS-3 (40 Mbps)	T1	1. 1/4 T1 2. ISDN 3. POTS
System Configurations	RmSys & Codec; RmSys & LAN ; DT & LAN	RmSys & Codec	RmSys & Codec	Codec-based room system	RmSys & Codec	RmSys & Codec
Videoconferencing System Vendors	CLI; P-Tel	CLI; AT&T	AT & T	custom built	VTEL	P-Tel
Network Services Vendor	Bell Atlantic	AT&T	MTS	Iowa Communications Network (ICN)	GTE	
Multipoint Conference Capable?	soon	Yes	No	yes	Yes	Yes
Telecommunications Services	1. Analog (satellite); Sw56; ISDN; FxT1; POTS	1. FxT1	1. ISDN 2. Sw56 3. ATM	DS-3; full or FxT1	FxT1	1. ISDN 2. FxT1 3. POTS
Greatest Distance Between Sites (Miles)	10,000	40	550	100	150	50
Total Number of Videoconferences in 1995	150	7	15	109*	32	49
Number of Patient-Physician Consults	8	6	4	3	3	3
Hours of Patient-Physician Consults	6	2			3	2
Videoconferences by Category (number/hours)	P-Ph (8/6h); Ph-Ph (2/2h); Edu. prog (9/9h); Med admin (6/3h); Bus (2/1.5h) Net admin (105/4h); VIP visits (18/2h)	P-Ph (6/2.3h); Comm serv: (1/1.25h); (see comments for 1996 info)	P-Ph: (4/-); Edu: (7/-); Med admin: (4/-)		P-Ph: (3/3); Edu: (-/1) Med Admin (-/4.5) Net Admin (22/22.5)	P-Ph: 3/1.5; Edu: 12/50h; Med admin : 24/28h; Net Admin (Multipoint bridging: 10/16h) (times are est)
Patient/Physician	8/6	6/2.3	4/-	3	3/3	3/1.5
Physician/Physician	2/2			12		
Educational Programming	9/9		7/-	77	1/1*	12/50
Medical Administrative	6/3		4/-	17	6/4.5*	24/28
Community Services		1/1.25				
Business	2/1.5					
Network Administration/Service	105/4				22/22.5	10/16
Other (Specified)	VIP Visits (18/2)			other meetings:15; training/tests:20; NICU consults (S&F); 51; ECG and vasc. imaging studies (S&F): 529		
Length of Average Clinical Consultation (min.)	30-50	20	30	40 minutes	60	20
Specialties in Patient/Physician Consults (Top 3)	1. Derm 2. Rad 3. Ortho	1. Medical Onc 2. (tie) Psych, NeuroSurg, Infectious disease		neonatology; cardiology; echocardiography/vascular (S&F); telepath; teleradiol.	1. Derm	1. Pulm 2. Ortho 3. Gen. Surg
Specialties in Physician/Physician consults	1. Derm 2. Infectious Disease 3. CV					
Types of funds used to implement network	Department of Defense (100%)	Internal; Federal grants	Internal; state/local funds	50% internal; 50% federal	Internal: 30%; Federal grant: 60%	Internal (50%); Federal grants (50%)
Type of funds used to operate network	Department of Defense (100%)	Internal; federal grants; state/local funds	Internal	80% internal; 20% federal	Internal: 40%; Federal grant: 60%	Internal (50%); Federal grants (50%)
Reimbursement	Department of Defense	Grant, Office of Rural Health Policy (Federal)			Grant, Office of Rural Health Policy (Federal)	Medicaid; Grant, Office of Rural Health Policy (Federal)
Comments		For 1996 (1-1 to 4-30): P-Ph consults (90/42.17h); Ph-Ph consults: (12/2.23h); med. admin.: (3/1.75h); community services (9/5.27h); demos (13/6.52h). Avg. consult length: med. onc: 16.5; psych: 30.3; speech path: 49.8; ENT: 14.5; pulm: 24.4				Also use AT & T (store & forward Picasso Phone)

Program Name	First Health Net (Comanche Memorial Hospital)	High Plains Rural Health Network	IWK Hospital for Children EchoCV Transmissions	New Hanover Regional Medical Center TeleMed Program	North Dakota TeleCare Network	Total Dental Access
Location	Lawton, OK	Ft. Morgan, CO	Halifax, Nova Scotia	Wilmington, NC	Bismarck, ND	Ft. Detrick, MD
Contact Information	Russell Blackwell 405/355-8620	Ryan Wiest 970/867-6195	John P. Finley, MD 902/428-8196	Geoffrey Honaker 910/343-0161	Shari Frueh 701/224-7130	Robert H. Vandre 301/619-7919
Hubs	1	2	1	1	1	2
Spokes	8	7	6	1	9	10
Date of program inception:		10/1/94	1987	10/1/95	Fall 1995	9/1/95
Two-way interactive video technology	CD	1. CD 2. POTS Video	BBA	1. CD	1. CD	1. CD 2. POTS Video
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1/4 - 1/2 T1	1. 1/4 T1	N/A	T1	T1	1. ISDN 2. POTS 3. 1/4 T1
System Configurations	RmSys & Codec	RmSys & Codec		RmSys & Codec		DT & Codec
Videoconferencing System Vendors	VTEL	VTEL		CLI	NEC	P-Tel; INMARSAT
Network Services Vendor	SW Bell	Internet Communications Corporation		Sprint	US West	AT&T
Multipoint Conference Capable?	yes	Yes	No	No	No	Yes
Telecommunications Services	full or FxT1	1. FxT1 2. ISDN	Analog	1. FxT1	FxT1	1. ISDN 3. Analog Satellite
Greatest Distance Between Sites (Miles)	90	225	650	60	250	2000
Total Number of Videoconferences in 1995	107		50	22	5	8
Number of Patient-Physician Consults	0	0	0*	0	0	0
Hours of Patient-Physician Consults	0			7		
Videoconferences by Category (number/hours)	107/105	Did not track this data	Ph-Ph (50/15h)	Ph-Ph (16/7h); Net admin : (6/6h); (Testing/troubleshooting (a lot more))		Ph-ph (2/-) Edu (4/-) Net Admin (1/-)
Patient/Physician	0					
Physician/Physician	0		50/15	16/7		2/-
Educational Programming	61/61					4/-
Medical Administrative	19/19					
Community Services						
Business						
Network Administration/Service				6/6		1/-
Other (Specified)	Speech pathology: 27/25			Testing/troubleshooting		
Length of Average Clinical Consultation (min.)	not tracked		20	10		6.5
Specialties in Patient/Physician Consults (Top 3)		1. Podiatry/Wound care 2. Cardiovascular 3. Derm				
Specialties in Physician/Physician consults			1. Pediatric CV	1. EchoCV		1. Periodontics 2. Oral Surg 3. endodontics
Types of funds used to implement network	70% internal; 30% federal grants	Internal (participant site) funds: 10%; Federal grant funds: 90%	State/local (Canadian Hospital System operating budget)	Internal (100%)	Internal (100%)	Internal (participant site): 10%; Federal grants 90%
Type of funds used to operate network	100% internal		N/A	Internal (100%)	Internal (100%)	Internal (participant site):10 %; Federal grants 90%
Reimbursement	managed/capitated care organizations			Echocard. interpretation is a reimbursable service; other planned applications are not	Medicaid	
Comments			*Currently doing about 50 pediatric echocardiogram cases/yr.	We are a public, not-for-profit institution developing our program in conjunction with private attending physicians. Thus, reimbursement is a concern. Our initial application is a S&F study that is reimbursable.	Started with 2 remote sites in Nov. 1995. 6 sites added in March 1996, and 1 in May 1996.	This pilot program will determine the costs/benefits of Army-wide telemed deployment. We expect the greatest savings to be from reduced travel for specialty appointments from remote sites in the U.S. and overseas. We also use Picasso still- image phones.

Program Name	Ultrasound in Managed Care Clinic	University of South Carolina TelePsych	UT M.D. Anderson Cancer Center	UTMB Family Med Primary Care Testbed
Location	Indianapolis, IN	Columbia, SC	Houston, TX	Galveston, TX
Contact Information	Steven Neal 317/929-2722	Eugene H. Kaplan, MD 803/434-4250	Lawrence Jones 713/745-1596	William J. Crump, MD 409/772-2782
Hubs	1	1	1	1
Spokes	7		2	1
Date of program inception:	8/1/93		2/1/94	1994
Two-way interactive video technology	1. CD 2. Analog video (other than POTS)	1. POTS Video	CD	1. CD 2. POTS Video
Transmission Speeds (ISDN=128 Kbps unless otherwise noted)	1. T1 2. broadcast analog	POTS	1. 1/2 T1 2. T1 3. 1/4 T1	POTS, ISDN, 1/4 T1, 1/2 T1, T1
System Configurations	RmSys & Codec		RmSys & Codec	RmSys & Codec
Videoconferencing System Vendors	VTEL and Ameritech	AT & T	CLI	CLI
Network Services Vendor	Ameritech & AT & T		Sprint; MCI; VidNet	UTMB internal system
Multipoint Conference Capable?	Yes	No	Yes	Yes
Telecommunications Services	1. FxT1 2. ISDN	1. POTS	1. FxT1 2. Analog (Sat/m-wave)	1. FxT1 2. POTS 3. ISDN
Greatest Distance Between Sites (Miles)	80	300	1500	20
Total Number of Videoconferences in 1995	500		672	268
Number of Patient-Physician Consults	0	NA	0	0
Hours of Patient-Physician Consults				
Videoconferences by Category (number/hours)	Edu(12/-) Med Admin (10/-) Bus. (10/-) Other (Ultrasound and MRI/CT 470/-) (All Estimates)	Did not track this data	Ph-Ph: (- / 142 hrs) Edu (-/480 hrs) Med Admin (- /50 hrs)	Ph -Ph: (- / 35 hrs) Edu (-/161 hrs) Med Admin (- /72 hrs) Net Admin: / Demos (-/ 10-15 hrs)
Patient/Physician				
Physician/Physician			- / 142	-/35
Educational Programming	12/-		-/480	-/161
Medical Administrative	10/-		-/50	-/72
Community Services	10/-			
Business				
Network Administration/Service				(Demos) -/10-15
Other (Specified)	*the majority of cases are tele ultrasound, sonography, and fluoroscopy 470/-			
Length of Average Clinical Consultation (min.)	5-60	45	20	15
Specialties in Patient/Physician Consults (Top 3)		1. Psych		
Specialties in Physician/Physician consults	1. Ultrasound 2. MRI/CT		1. Breast Onc 2. Lymphoma 3. Melanoma	1. Derm 2. ENT 3. Ophthalmology
Types of funds used to implement network	Internal (participant site): 100%	Participants purchased individual videophones	Internal (participant site): 100%	Internal (participant site): 100%
Type of funds used to operate network	Internal (participant site): 100%	Patient-out of pocket	Internal (participant site): 100%	Internal (participant site): 100%
Reimbursement	Medicare; Medicaid; BC/BS; private insurers; managed/capitated care orgs; private contracts with individual hospitals	Patient-out of pocket		
Comments	Focus on requirements, relationships, and quantifiable benefits prior to even looking at technology or specific solutions.			